**Microeconomics**

**Chapter 7**

**36A.** **Key Problem**

a) See Figure 7.8

**Figure 7. 8 (completed)**

b) It is easiest to answer this question by referring to the data in Table 7.3, although the answers could also be read off the graph.

**Output:** 30 40 50 60 70 80 90 100 110 120

**Plant 1 2 2 3 3 4 4 4 5 5**

c) See Figure 7.8

d) **Plant 3 (**Minimum efficient scale is the smallest level of output at which a firm is able to minimize long-run average cost.)

e) Minimum long-run average cost is achieved at an output of **60**.

f) **Yes**  (excess capacity exists because an output of 80 is below the output---90--- at which minimum average cost of $4 is achieved)

g) Output of **110**  (economic capacity is where short-run average costs are minimized)

h) Between the outputs of **0 and 60**, where long-run average costs are declining.

i) Between the outputs of  **61 and 90**, where long-run average costs are constant.

j) **Above the output of 90**, where long-run average costs are increasing.

k) The market is too small for plant sizes **3, 4 and 5** since all have economic capacity at outputs above 50.

**38A.** a) plant 1: **50**

plant 2: **60**

plant 3: **80**

plant 4: **90**

(These are the lowest average costs for each plant.)

b) Plant 4; at an output of 90

c) Plant 2 (This is the lowest average cost of all the plants for that output.)

d) plant 3 (This is the lowest average cost of all the plants for that output.)

**39A.** a) all are **economic capacity** outputs

b) plant 3 (It is the lowest average cost for any of the plants.)

c) zero and 600 (The average costs – at capacity output – falls between these outputs.)